

DECLARATION AND POWER OF ATTORNEY FOR ORIGINAL U.S. PATENT APPLICATION

Attorney's Docket No. CISC686

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SUPPRESSION OF DOUBLE RAYLEIGH BACKSCATTERING AND PUMP REUSE IN A RAMAN AMPLIFIER**, the specification of which,

(check one)

1. ☒ is attached hereto.
2. ☐ was filed on _____ as
U.S. Application No. _____
and was amended on _____.
3. ☐ was filed on _____ as
International PCT Application No. _____
and was amended on _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, CFR § 1.56.

I hereby claim foreign priority benefits under Title 35, United States code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Benefits Claimed?

(Appl. No.) (Country) (Filing Date)

☐ Yes ☐ No

(Appl. No.) (Country) (Filing Date)

☐ Yes ☐ No

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Prior Provisional Application(s)

(Application No.) (Filing Date)

(Application No.) (Filing Date)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Prior U.S. Application(s)


_____	_____	_____
(Application No.)	(Filing Date)	(Status - patented, pending, abandoned)
_____	_____	_____
(Application No.)	(Filing Date)	(Status - patented, pending, abandoned)

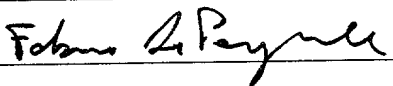
And I hereby appoint the law firm of Ritter, Lang & Kaplan LLP, including **Michael J. Ritter (Reg. No. 36,653); Dan H. Lang (Reg. No. 38,531); Cindy S. Kaplan (Reg. No. 40,043); and Peggy A. Su (Reg. No. 41,336)** as my principal attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Please Direct all Correspondence To: **Customer No. 26541**
Ritter, Lang & Kaplan LLP
12930 Saratoga Ave., Suite D1
Saratoga, CA 95070

Direct Telephone Calls To: **Dan H. Lang at telephone number (408) 446-8694**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Typewritten Full Name of First Inventor: Emilio Casaccia Citizenship: Italian
Inventor's signature:  Date of Signature: Jul 23rd, 2001
Address: (City) Monza (State/Country) Italy
Post Office Address: via Appiani, 22, 20052 Monza, Italy

Typewritten Full Name of Second Inventor: Fabrizio Di Pasquale Citizenship: Italian
Inventor's signature:  Date of Signature: Jul 30, 2001
Address: (City) Milano (State/Country) Italy
Post Office Address: Via Bartolomeo Eustachi 20, 20126, Milano, Italy

Typewritten Full Name of
Third Inventor: Giorgio Grasso

Citizenship: Italian

Inventor's signature: _____

Date of Signature: _____

Address: (City) Monza

(State/Country) Italy

Post Office Address: Via Canesi 8, 20052, Monza, Italy

TOP SECRET

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Prior Foreign Application(s)

Priority Benefits Claimed?

☐ Yes ☐ No

(Appl. No.)

(Country)

(Filing Date)

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Typewritten Full Name of

First Inventor: _____ Emilio Casaccia _____ **Citizenship:** _____ Italian _____

Inventor's signature: _____ **Date of Signature:** _____

Address: (City) _____ Monza _____ **(State/Country)** _____ Italy _____

Post Office Address: _____ via Appiani, 22, 20052 Monza, Italy _____

Typewritten Full Name of

Second Inventor: _____ Fabrizio Di Pasquale _____ **Citizenship:** _____ Italian _____

Inventor's signature: _____ **Date of Signature:** _____

Address: (City) _____ Milano _____ **(State/Country)** _____ Italy _____

Post Office Address: _____ Via Bartolomeo Eustachi 20, 20126, Milano, Italy _____

Typewritten Full Name of
Third Inventor: Giorgio Grasso

Citizenship: Italian

Inventor's signature: James Smith

Date of Signature: 1/08/2009

Address: (City) Monza

(State/Country) Italy

Post Office Address: Via Canesi 8, 20052, Monza, Italy

Parameter	Value	Unit
Initial concentration of H_2O_2	0.01	M
Initial concentration of Fe^{2+}	0.001	M
Initial concentration of H^+	0.1	M
Temperature	25	$^{\circ}\text{C}$
Reaction time	0 to 100	min
Reaction rate constant k	0.001	min^{-1}
Reaction order	1	
Half-life $t_{1/2}$	69.3	min
Activation energy E_a	40.0	kJ/mol
Pre-exponential factor A	1.0	min^{-1}
Reaction mechanism	Free radical chain reaction	
Rate-determining step	Decomposition of Fe^{2+}	
Overall reaction	$\text{H}_2\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{O}_2$	
Yield of O_2	0.01	M
Yield of H_2O	0.01	M
Yield of Fe^{3+}	0.001	M
Yield of H^+	0.1	M
Yield of OH^-	0.001	M
Yield of Fe^{2+}	0.001	M
Yield of H_2O_2	0.01	M
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